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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/706,726
Filing Date: November 12, 2003
Appellant(s): STREUER, PETER

Marcus W. Sprow
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 22nd 2009 appealing from the Office action mailed October 6th, 2008.

Real party in Interest

- (1) A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

There are no related Appeals and Interferences to this Appeal.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Claimed Subject Matter*

The summary of claimed subject matter contained in the brief is correct.

(6) *Grounds of Rejection to be Reviewed on Appeal*

The appellant's statement of the grounds of rejection in the brief is correct.

(7) *Claims Appendix*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

Number	Name	Date
DE 3330823 A1	Krabatsch	March 1 st , 1984
US 6,733,921 B2	Richter et al.	May 11 th , 2004
US 4,201,547	Spaziente et al.	May 6 th , 1980

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Claims 13-18, 21-27, 30, 32 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krabatsch et al. European Patent No. (DE 33 30 823 A1)

With respect to claims 13-17, 21, 23, 24, 25, 26, 30, 32, 35 Krabatsch et al. discloses a plug for an accumulator "battery". The plug has degassing openings **9** and **19** and **18** (See Figure).

Krabatsch et al. teach an upper part **21** with opening **18** to the outside and a lower part **7** (See Figure). Opening **18** is also connected to the splash basket **7** (See Figure).

Krabatsch et al. teaches an acid cage **7** "splash basket" having an inner diameter that increases from the free end to the upper end of the acid cage and slots continuing as far as the free end of the splash basket (See Figure) (See page 2 line 1-10).

With respect to the shape of the slots, Krabatsch et al. do not specifically teach wherein each of the slots has a width that broadens with increasing distance from the free end of the splash basket. Unless applicant shows criticality for the claimed features, changes in size and shape is obvious absent a showing of unexpected results.

In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

It is noted that applicant's slot widths and basket shape appear to be similar to, if not identical to that shown in the Figure in DE 3330823.

With respect to slots including a free end extending toward the free end of the splash basket, Krabatsch et al. teach that feature **10** of the plug is an opening.

Since, there is no showing of unexpected results or showing of criticality of the end of Applicant's slots being free as claimed by the Applicant as opposed to the slots of Krabatsch et al. having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al.

With respect to allowing the splash basket to flex upon insertion into the openings of the degassing system, Krabatsch et al. discloses having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al. Examiner also notes that without the oring **24** of Krabatsch et al. being present would save material costs in the plug of Krabatsch et al. Examiner notes that oring **24** is a flexible material that would allow the splash basket of Krabatsch et al. to flex upon insertion into the openings of the degassing system of Krabatsch et al.

With respect to claim **22**, Krabatsch et al. teach that annular grooves **4** and **6** are indented, into which O-rings **5** are inserted, in order to seal part **21** with the inner wall of the cover **1** (See Figure) (See Page 2 lines 8).

Claims 19, 20, 28, 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krabatsch et al. European Patent No. (DE 33 30 823 A1) in view of Spaziante et al. (U.S. Patent No. 4,201,647).

With respect to claims 19, 20, 28, 29 and 33, Krabatsch et al. discloses a plug for an accumulator "battery" in paragraph 2 above. Krabatsch et al. teach that the plug has degassing openings **9** and **19** and **18** (See Figure).

Krabatsch et al. teach an upper part **21** with opening **18** to the outside and a lower part **7** (See Figure). Opening **18** is also connected to the splash basket **7** (See Figure).

Krabatsch et al. teaches an acid cage **7** "splash basket" having an inner diameter that increases from the free end to the upper end of the acid cage and slots continuing as far as the free end of the splash basket (See Figure) (See page 2 line 1-10).

With respect to the shape of the slots, Krabatsch et al. do not specifically teach wherein each of the slots has a width that broadens with increasing distance from the free end of the splash basket. Unless applicant shows criticality for the claimed features, changes in size and shape is obvious absent a showing of unexpected results.

In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

It is noted that applicant's slot widths and basket shape appear to be similar to, if not identical to that shown in the Figure in DE 3330823.

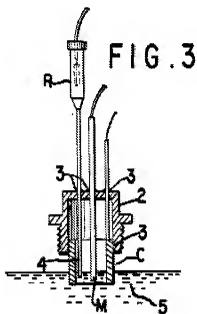
With respect to slots including a free end extending toward the free end of the splash basket, Krabatsch et al. teach that feature **10** of the plug is an opening. Since, there is no showing of unexpected results or showing of criticality of the end of Applicant's slots being free as claimed by the Applicant as opposed to the slots of Krabatsch et al. having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al. Examiner also notes that without the oring 24 of Krabatsch et al. being present would save material costs in the plug of Krabatsch et al.

Krabatsch et al. do not disclose at least one of as state of charge indicator and acid level indicator attached to the upper part of the sealing plug and passing through the lower part of the sealing plug cavity.

However, Spaziente et al. discloses measuring electrodes and process (title) wherein, considering the discharging voltage characteristics of a lead battery, it is evident that the voltage determination cannot give a reliable indication of the charge condition of the battery since even near full discharge the voltage is almost the same as that of a fully charged battery. A reliable method to assess the charge condition is to measure the acid concentration (Col 2 lines 4-20). Spaziente et al also teach that in FIG. 3, the assembly is comprised of a measuring electrode M, a counter-electrode C for activating the measuring electrode M by anodic polarization of the same in an acidic or basic solution and a reference electrode R (Col 6 lines 5-16). The measuring

assembly constituted by the three electrodes placed in the electrolyte of the battery is moreover useful in detecting and eventually signaling the lowering of the level of the electrolyte below the recommended minimum (Col 9 lines 45-65) (See Fig. 3).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the battery level/charge indicator of Spaziante et al into the battery plug of Krabatsch et al. because Spaziante et al teach that the measuring assembly constituted by the three electrodes placed in the electrolyte of the battery is moreover useful in detecting and eventually signaling the lowering of the level of the electrolyte below the recommended minimum (Col 9 lines 45-65).



With respect to claims 18, 27 and 34, Krabatsch et al. as modified by Spaziante et al. is silent as to the roughness of the splash guards. However, it is the position of

the examiner that such properties are inherent, given that the materials of construction of the plug of Krabatsch et al. as modified by Spaziant et al. have an inherent roughness. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. In re Robertson, 49 USPQ2d 1949 (1999).

With respect to claims 19, 28-29 and 33, Krabatsch et al. as modified by Spaziant et al. discloses a plug for an accumulator "battery" (See Figure. Spaziant et al also teach that in FIG. 3, the assembly is comprised of a measuring electrode M, a counter-electrode C for activating the measuring electrode M by anodic polarization of the same in an acidic or basic solution and a reference electrode R (Col 6 lines 5-16). The measuring assembly constituted by the three electrodes placed in the electrolyte of the battery is moreover useful in detecting and eventually signaling the lowering of the level of the electrolyte below the recommended minimum (Col 9 lines 45-65) (See Fig. 3).

The instant specification recites the state of charge indicator and/or electrolyte level indicator may also have a roughened surface (Paragraph 0019). Thomas et al and Spaziant et al are silent as to the roughness of the charge indicator and/or electrolyte level indicator. However, it is the position of the examiner that such properties are inherent, given that the materials of construction of the charge indicator and/or electrolyte level indicator of Thomas et al. and Spaziant et al have an inherent roughness. A reference which is silent about a claimed invention's features is inherently

anticipatory if the missing feature is necessarily present in that which is described in the reference. In re Robertson, 49 USPQ2d 1949 (1999).

Claims 31 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krabatsch et al. European Patent No. (DE 33 30 823 A1) in view of Richter et al. (U.S. Patent No. 6,733,921 B2).

With respect to claims 31 and 36, Krabatsch et al. discloses a plug for an accumulator "battery". The plug has degassing openings **9** and **19** and **18** (See Figure).

Krabatsch et al. teach an upper part **21** with opening **18** to the outside and a lower part **7** (See Figure). Opening **18** is also connected to the splash basket **7** (See Figure) in paragraph 2 above.

Krabatsch et al. teaches an acid cage **7** "splash basket" having an inner diameter that increases from the free end to the upper end of the acid cage and slots continuing as far as the free end of the splash basket (See Figure) (See page 2 line 1-10).

Krabatsch et al. do not specifically teach that the sealing plug is formed from an electrically conductive plastic. However, Richter et al. disclose a rechargeable electric battery (title) wherein a rechargeable electric battery including a plate block arranged in a plastic block box, positive and negative electrodes located in the box and electrically isolated by separators and conductively connected by sulfuric acid electrolyte, a cover for the box which has closure plugs and/or acid state indicators fitted in a gas-tight

manner to openings therein, wherein at least a portion of an inner surface of the battery is electrically conductive or is provided with an electrically conductive layer, beginning in an area of a sealing seat of the closure plug or of the acid state indicator, and is electrically conductively connected to the electrolyte (Col 2 lines 35-47). Richter et al. also teach that the electrical connection between closure plug and acid is provided by immersing the lower part of the plug into the electrolyte or via parts of the rechargeable battery which provide an electrical connection to the acid, or via an active capillary wick which effects the connection to the electrolyte (Col 4 lines 10-20).

With respect to the sealing plug formed from electrically conductive plastic, Richter et al. teach that the plug can be composed of, for example, corrosion resistant metal, conductive plastic, carbon (graphite, pyrolytic carbon), plastic doped with carbon powder or carbon fibers or conductive ceramic material (Col 3 lines 60-67).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the conductive plastic material of Richter et al. as sealing plug material in Krabatsch et al because conductive plastic material is resistant to the corrosive internal environment of batteries.

(10) Response to Argument

Applicant state that: The Examiner indicated on page 4 of the Office Action mailed October 6, 2008 that the Appellant has provided "no showing of... criticality of the end of Applicant's slots being free." The Appellant respectfully disagrees. The present specification includes numerous descriptions related to the criticality of the free ends of the plates. Paragraphs [0006] and [0014]-[0016] of the present specification are provided here as one example of such a statement (with underlining added for emphasis):

[0006] An electrical rechargeable battery which is described by the Laid-Open Specification DE 19856691 A1 has degassing plugs which are arranged in a cell cover and on whose lower part a splash basket is provided. On its circumference, the splash basket has slots which widen downwards. The splash basket likewise has a base, which is tilted inwards and extends upwards in a conical shape towards the center of the plug. At the bottom, the slots are bounded by the base. This makes the degassing plug stiff, which means that the degassing plug must be inserted accurately at right angles to the cell cover.

[0014] According to an exemplary embodiment, a battery (e.g., a rechargeable lead-acid vehicle battery for use in starting, lighting, and ignition applications) includes a housing which has two or

more cells that can be filled with an electrolyte A sealing plug is also provided that can be introduced into each of the openings (e.g., for sealing openings which are incorporated above the cells in the battery) such that an upper part of the sealing plug covers the openings on the outside, and a lower part of the sealing plug extends in the direction of the cells and has a splash basket which surrounds a cavity and has longitudinal slots distributed over its circumference. According to an exemplary embodiment, the slots continue as far as a free end of the splash basket.

[0015] One advantageous feature of such an arrangement is that the cover of a rechargeable battery can be sealed relatively easily by means of the sealing plug (e.g., the sealing plug need not be inserted absolutely at right angles to the cover surface). If the sealing plug is inserted obliquely into the cover of a rechargeable battery, and the splash basket in the process abuts against the inner walls of the rechargeable battery, then the insertion process can be continued further to its final position owing to the flexibility provided for the splash basket by means of the continuous slots.

[0016] According to an exemplary embodiment, the sealing plug is integral. The splash basket elasticity which is achieved by the slots is in this case advantageously transferred to the entire sealing plug. It is particularly preferable for the sealing plugs to be

produced using a plastic injection-molding method. This results in the advantage of slight elasticity in the longitudinal direction as well. The mobility of the plates, which are formed by the slots, of the splash basket allows the sealing plug to be inserted into the cover via the openings even without being centered exactly.

Accordingly, the Appellant has provided a clear description of the criticality of having free ends of the splash basket in which the plates are not coupled to each other to restrict their movement. The advantage of such a configuration is not disclosed, taught, or suggested by Krabatsch.

In response, Examiner notes that Krabatsch et al. teach that feature **10** of the plug is an opening. Since, there is no showing of unexpected results or showing of criticality of the end of Applicant's slots being free as claimed by the Applicant as opposed to the slots of Krabatsch et al. having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al. Also, Examiner also notes that without the oring **24** of Krabatsch et al. being present would save material costs in the plug of Krabatsch et al.

Examiner also notes that the base of the plug of DE19856691 A1 Applicant is referring to in their specification and the base of the prior art (DE3330823 A1, Krabatsch et al.) plug used in the rejection are different. The base of plug DE19856691 A1 is more restrictive than that of the prior art plug (DE3330823 A1, Krabatsch et al.) used in the final rejection).

Applicants argue that: Krabatsch does not disclose, teach, or suggest that "each of the slots has a width that broadens with increasing distance from the terminal end of the splash basket" as recited in Claims 15 and 24. Instead, Krabatsch discloses rectangular slots that appear to have the same width along the entire length of the slots. See Krabatsch at FIG. 1. Slots having "a width that broadens with increasing distance from the terminal end of the splash basket," as recited in Claims 15 and 24, for example, allows the end of the splash basket to be more "elastically deformable, in particular in response to laterally applied forces." See Specification at page 6, lines 23-25 and FIGS. 1a-2.

In response Examiner notes that with respect to the shape of the slots, Krabatsch et al. do not specifically teach wherein each of the slots has a width that broadens with increasing distance from the free end of the splash basket. Unless applicant shows criticality for the claimed features, changes in size and shape is obvious absent a showing of unexpected results.

In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

It is noted that applicant's slot widths and basket shape appear to be similar to, if not identical to that shown in the Figure in DE 3330823.

Applicants state that: Krabatsch does not disclose, teach, or suggest that "the sealing plug has an opening provided therein separate from the slots and adjacent to the openings of the degassing system and the degassing system is connected to the splash basket via the opening in the sealing plug such that the slots form return paths for electrolyte from the degassing system" as recited in Claims 16 and 25. The Examiner has provided no support for the contention that Krabatsch discloses a "sealing plug" having "an opening provided therein separate from the slots and adjacent to the openings of the degassing system" (underlining added for emphasis). The Examiner also has provided no support for the contention that Krabatsch discloses "the degassing system" being "connected to the splash basket via the opening in the sealing plug such that the slots form return paths for electrolyte from the degassing system." This is not supposing, because nowhere disclosed, taught, or suggested by Krabatsch is a "sealing plug" having "an opening provided therein separate from the slots and adjacent to the openings of the degassing system and the degassing system is connected to the splash basket via the opening in the sealing plug such that the slots form return paths for electrolyte from the degassing system."

In response, Examiner notes that Krabatsch et al. teach degassing openings **9** and **19** and **18** (See Figure).

Applicant's state that: Claim 26 depends from independent Claim 23 and recites that "the sealing plug is integrally formed as part of the degassing system." Krabatsch does not disclose, teach, or suggest that the sealing plug is integrally formed as part of the

degassing system" as recited in Claims 17 and 26. Instead, Krabatsch discloses a "plug" that is a separate and distinct component of an "accumulator." See Krabatsch at FIG. 1.

In response Examiner notes that Krabatsch et al. discloses a plug for an accumulator "battery" therefore when in use these components (the plug and battery) will be integral. With respect to the language "formed". This raises an issue of process limitation in a product claim.

Applicant's argue that: Claim 27 depends from independent Claim 23 and recites that "the splash basket has a roughened surface." The Examiner has provided no support for the contention that Krabatsch discloses that "the splash basket has a roughened surface" as recited in Claims 18 and 27. This is not surprising, because nowhere in Krabatsch is it disclosed, taught, or suggested that "the splash basket has a roughened surface." As taught by the present disclosure, for example, the "rough surface" is used "to prevent the electrolyte from being able to rise in the slots 14 in the splash basket 13 towards the cover 1, for example as a result of capillary forces." See Specification at page 7, lines 3-6.

In response Examiner notes that Krabatsch et al. as modified by Spaziante et al. is silent as to the roughness of the splash guards. However, it is the position of the examiner that such properties are inherent, given that the materials of construction of the plug of Krabatasch et al. as modified by Spaziante et al. have an inherent

roughness. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. In re Robertson, 49 USPQ2d 1949 (1999).

Applicants argue that: Claim 22 depends from independent Claim 13 and recites that "the sealing plug has a seal which is fitted to the upper part of the sealing plug for sealing the cover." Krabatsch does not disclose, teach, or suggest that "the sealing plug has a seal which is fitted to the upper part of the sealing plug for sealing the cover." Instead, Krabatsch discloses an "o-ring 5" around an "outer circumference of the bottom part 15" (underlining added for emphasis). See Krabatsch at page 2, lines 13-14 and FIG. 1.

In response Examiner notes that Krabatsch et al. teach that annular grooves **4** and **6** are indented, into which O-rings **5** are inserted, in order to seal part **21** with the inner wall of the cover **1** (See Figure) (See Page 2 lines 8).

Applicants argue that: Claim 19 depends from independent Claim 13 and recites "an acid level indicator is attached to the upper part of the sealing plug and the acid level indicator has a roughened surface."

Claim 20 depends from independent Claim 13 and recites "a state of charge indicator is attached to the upper part of the sealing plug and the state of charge indicator has a roughened surface."

The combination of Krabatsch and Spaziante does not disclose, teach, or suggest that "the acid level indicator has a roughened surface" as recited in Claim 19, or that "the state of "charge indicator has a roughened surface" as recited in Claim 20.

In response: Examiner notes that the instant specification recites "the state of charge indicator and/or electrolyte level indicator may also have a roughened surface" (Paragraph 0019). Thomas et al and Spaziante et al are silent as to the roughness of the charge indicator and/or electrolyte level indicator. However, it is the position of the examiner that such properties are inherent, given that the materials of construction of the charge indicator and/or electrolyte level indicator of Thomas et al. and Spaziante et al have an inherent roughness. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily present in that which is described in the reference. In re Robertson, 49 USPQ2d 1949 (1999).

Applicants state that: Krabatsch does not disclose, teach, or suggest that "the plates at the terminal end of the splash basket are not connected to adjacent plates, whereby the separation of the plates at the terminal end of the splash basket allows the splash basket to flex upon insertion into the openings of the degassing system."

In response Examiner notes that that applicant's slot widths and basket shape appear to be similar to, if not identical to that shown in the Figure in DE 3330823.

With respect to slots including a free end extending toward the free end of the splash basket, Krabatsch et al. teach that feature **10** of the plug is an opening.

Since, there is no showing of unexpected results or showing of criticality of the

end of Applicant's slots being free as claimed by the Applicant as opposed to the slots of Krabatsch et al. having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al.

With respect to allowing the splash basket to flex upon insertion into the openings of the degassing system, Krabatsch et al. discloses having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al. Examiner also notes that without the oring 24 of Krabatsch et al. being present would save material costs in the plug of Krabatsch et al. Examiner notes that oring 24 is a flexible material that would allow the splash basket of Krabatsch et al. to flex upon insertion into the openings of the degassing system of Krabatsch et al.

Applicants state that: Krabatsch does not disclose, teach, or suggest that "the plates are not connected to adjacent plates at the terminal end of the splash basket to allow free movement of the plates relative to each other upon insertion into an opening of the rechargeable battery."

In response Examiner notes that that applicant's slot widths and basket shape appear to be similar to, if not identical to that shown in the Figure in DE 3330823.

With respect to slots including a free end extending toward the free end of the splash basket, Krabatsch et al. teach that feature **10** of the plug is an opening.

Since, there is no showing of unexpected results or showing of criticality of the end of Applicant's slots being free as claimed by the Applicant as opposed to the slots

of Krabatsch et al. having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al.

With respect to allowing the splash basket to flex upon insertion into the openings of the degassing system, Krabatsch et al. discloses having lower edge support **24** at the end of the slots of Krabatsch et al., the plug of Applicant is obvious variant of the plug of Krabatsch et al. Examiner also notes that without the oring 24 of Krabatsch et al. being present would save material costs in the plug of Krabatsch et al. Examiner notes that oring 24 is a flexible material that would allow the splash basket of Krabatsch et al. to flex upon insertion into the openings of the degassing system of Krabatsch et al.

For the above reasons, it is believed that all the rejections should be sustained.

(11) Related Proceedings Appendix –37 C.F.R. 41.37 (c)(1)(x)

There are no related proceedings to this Appeal.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Art Unit: 1795

/Ben Lewis/

Examiner, Art Unit 1795

Conferees:

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795

/William Krynski/

Quality Assurance Specialist, TC1700